

Case Report

Treating HIV in Africa

Case report from rural Congo

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Figure 1. Prevalence of HIV (2004): Territory size shows the proportion of worldwide HIV prevalence.



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Human immunodeficiency virus continues to devastate sub-Saharan Africa (**Figure 1**).¹ Despite evidence to the contrary,² many physicians still question whether AIDS treatment is even possible in resource-limited settings. Rural HIV-positive Africans are often tormented by fear of discrimination, fear of HIV-related stigma, and confusion from conflicting traditional and faith-based beliefs.³ Within this context, stories of survival—successful antiretroviral treatment (ART)—are powerful motivators for physicians, patients, and communities.

Differential access to services, diagnoses and screening, practitioner factors, and patient adherence can affect the effectiveness of our clinical interventions.⁴ Success stories are emerging, however, as Médecins Sans Frontières (MSF) (Doctors Without Borders) and other medical organizations integrate HIV and AIDS care into basic health care programs in resource-limited settings. We present this case report to raise awareness of integrated HIV care,⁵ which has implications for family physicians working internationally

and for those working with African refugees in Canada. This case outlines the process of diagnosis and management of a patient who presented to a basic health program that had integrated HIV and AIDS care in a rural village in the Republic of Congo (ROC). It highlights the central role of psychosocial counseling and simplified single-pill ART, together with management protocols that integrate HIV care.

Case description

Claire* arrived at the Kindamba hospital on her mother's back. She had a headache and was cachectic, feverish, and unable to stand. Claire, who was a 23-year-old single mother of 2 small children, had only a few years of primary school education and managed to generate money for her family with a small vegetable garden. On examination she weighed 38 kg (body mass index of 14.8 kg/m²) and had a left hemiplegia as well as a temperature of 40°C. There were no clinical signs of meningismus, lymphadenopathy, or oral or genital lesions, and examination of the lungs found nothing remarkable.

*The patient's name has been changed.

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Context

The leading causes of morbidity and mortality in the ROC are malaria, respiratory tract infections, and diarrheal diseases.^{6,7} Each of these diseases can be aggravated by HIV and AIDS, which in the ROC has an estimated prevalence of 3.3% to 7.5%.⁸ The public health system operates with a minimal budget. In this conflict-affected setting, the rural Kindamba hospital—serving a population of 15 000—was supported by an MSF basic health program, with integrated HIV treatment capacity. The program employed 2 doctors, 3 nurses, 2 midwives, and 2 psychologists, and also had medical logistic and basic laboratory support. The Congolese medical team had participated in a 4-week training program in the management of HIV-related illness, receiving international mentorship from experienced MSF AIDS advisors.⁵

Clinical investigations

Investigations revealed the following: a hemoglobin level of 70 g/L, a normal white blood cell count, negative results of a thick smear for malaria, a positive rapid plasma reagin test result for syphilis antibody, a positive test result for hepatitis B surface antigen, and a negative pregnancy test result. Owing to the presence of focal neurological signs, a lumbar puncture was not performed, and x-ray facilities were not available in the project.

Claire was admitted to hospital. She received high-dose cotrimoxazole (ie, 800 mg of sulfamethoxazole and 160 mg of trimethoprim orally twice daily) for presumed cerebral toxoplasmosis and was treated for syphilis with benzathine penicillin G (2.4 million units weekly for 3 weeks). Her condition improved remarkably over 1 week and she began to walk again. A team psychologist offered HIV counseling and testing. She had a positive result with rapid HIV antibody testing. The team referred her to a nearby sister hospital, where her CD4 cell count was measured at 50 cells/mm³.

After several sessions of in-depth counseling to communicate the nature of HIV, the availability of effective AIDS treatment, and practical support on how to incorporate biomedical treatment approaches to HIV with traditional and faith-based approaches, Claire accepted her HIV-positive status. She disclosed the results to her mother, who remained supportive, and Claire expressed an interest in taking ART. She was diagnosed with World Health Organization (WHO) clinical stage IV disease and was therefore eligible for ART according to the MSF and WHO guidelines.⁹

Treatment

The medical team prescribed ART, Triomune 30 (ie, a generic, single, fixed-dose combination pill, including 30 mg of stavudine, 150 mg of lamivudine, and 200 mg of nevirapine). The team also provided a nutritional

biscuit supplement to address her low body mass index. She continued to take the high-dose cotrimoxazole for 6 weeks, after which she began a prophylactic dose (ie, 800 mg of sulfamethoxazole and 160 mg of trimethoprim once daily).

Within 2 months Claire gained 10 kg and was discharged home in stable condition. She was well-groomed and punctual when she arrived at all follow-up medical appointments (which occurred monthly for 3 months after ART initiation, and every 3 months thereafter). To minimize the risk of medication interruption if acute insecurity developed from war-related conflict, she was given an additional 1-week security supply of antiretrovirals and cotrimoxazole. At her 6-month follow-up appointment, Claire's CD4 cell count had increased to 374 cells/mm³ and she had gained 20 kg in weight. After 12 months taking ART, her CD4 cell count rose to 437 cells/mm³.

Discussion

This case demonstrates a common presentation, as well as a common diagnostic, counseling, treatment, and monitoring approach, of a rural patient from the ROC with HIV-related illness. Claire was 1 of 236 patients

successfully treated within the first 2 years of integrated HIV care in the Pool Region. Cerebral toxoplasmosis, Claire's presenting diagnosis, is a common HIV-related illness in the Kindamba area, and it typically responds within a week to high-dose cotrimoxazole treatment.


This report highlights the critical role of counseling to reduce fear and increasing treatment literacy in order to help achieve the greater than 95% adherence rates required for sustained ART success.^{10,11} Other key enablers included training that provided initially reluctant rural physicians the awareness and knowledge needed to consider HIV-related opportunistic infections. The accessibility of point-of-care HIV testing, the simplified but effective ART management protocols, and the drug effect and disease monitoring within the community were also factors that played a role in enabling Claire's care.

Claire's 20-kg weight gain, her improved grooming, her renewed ability to walk, and the substantial increase in her CD4 cell count demonstrated the effectiveness of the ART and served as powerful testimony to other patients and the rural hospital staff. Demonstrating value, to both patients and health care providers, is often cited as an important ingredient in the dissemination of new innovations.¹² The CD4 cell counts are a simple way to determine the level of immunosuppression and the treatment effect of ART. With basic training, mentorship, and allied health counselor support, physicians can potentially enter into the delivery of HIV care.

Despite successes, HIV programs face further challenges in the future. These include the sustainability of quality care after international organizations leave, the need to address both the prevention of perinatal HIV transmission and treatment of children, and the eventual need for more costly and complex second-line regimens for those failing first-line ARTs. Even if HIV care programs are

not successfully sustained by the Ministry of Health, we argue that capacity building through the training of national health personnel, the design, promotion, and implementation of chronic disease management approaches and education, as well as empowerment of the local HIV-infected or HIV-affected population are all valuable for the development of future services for patients with HIV.

Conclusion

We hope this case report will sensitize family doctors to the issues of HIV in Africa and possibly inspire them to contribute to medical HIV-related work. Family physicians who are interested in helping might also consider donating to reputable nongovernmental organizations or foundations that address AIDS in Africa (eg, Stephen Lewis Foundation, Dignitas International, and MSF). 

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Competing interests

None declared

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EDITOR'S KEY POINTS

- The management of HIV can be effectively integrated into basic health programs in sub-Saharan Africa.
- Psychosocial counseling is critical to helping patients integrate biomedical beliefs (ie, antiretroviral treatment [ART]) within the context of traditional and faith-based beliefs.
- Key elements for effective HIV care include fixed-dose ART, treatment protocols, adherence counseling, and monitoring.
- Demonstrating the power of ART can transform reluctant medical staff and community members into motivated learners and advocates for HIV care.

POINTS DE REPÈRE DU RÉDACTEUR

- La prise en charge du VIH peut être efficacement incorporée dans les programmes de santé de base en Afrique subsaharienne.
- Il est essentiel d'offrir du counseling psychosocial pour aider les patients à intégrer les croyances biomédicales (p. ex. le traitement antirétroviral [ARV]) dans le contexte de leurs croyances traditionnelles et religieuses.
- Pour des soins efficaces dans les cas de VIH, les principaux éléments sont les suivants: traitement à doses fixes d'ARV, protocoles de traitement, counseling sur la conformité au traitement et surveillance.
- La démonstration du pouvoir des ARV peut transformer un personnel médical et des membres de la communauté récalcitrants en apprenants motivés et en défenseurs des soins pour le VIH.

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